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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/804,381	03/13/2001	Sin-Gu Kang	06192.0194.NPUS00	1173

7590 10/05/2004
McGuire Woods LLP
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EXAMINER

NGUYEN, JENNIFER T

ART UNIT	PAPER NUMBER
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2674

11

DATE MAILED: 10/05/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/804,381

Applicant(s)

KANG, SIN-GU

Examiner

Jennifer T Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 March 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 and 20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6, 8-15 and 20 is/are rejected.
- 7) ☒ Claim(s) 7, 16 and 17 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 10.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. This Office action is responsive to amendment filed on 05/14/2004.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-6, 9-15, and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Kawaguchi et al. (Patent No.: 5,592,199).

Regarding claims 1, 12, referring to Figs. 1, 2, and 14, Kawaguchi teaches a driving module for applying a driving signal to a display cell circuit formed on a transparent substrate (2), the driving module comprising: a flexible board (4); a driving circuit (i.e., IC 5) mounted on the flexible board (4) (Fig. 1) (col. 18, lines 39-56); a driving signal line group (41, 42, 43, and 44) which is in electrical communication with the driving circuit (5) and the display cell circuit so as to input/output the driving signal (col. 18, line 56 to col. 19, line 21); an inspecting patterns (i.e., prober terminal) formed on the driving signal line group (41, 42, 43, and 44) for inspecting states of the driving signal line group and the driving signal (col. 22, lines 51-61).

Regarding claim 2, Kawaguchi further teaches driving signal line group is formed at a side of the transparent substrate (Fig. 2).

Regarding claim 3, Kawaguchi further teaches the driving circuit is a gate driving circuit, and the driving signal is a gate driving signal that is applied from the gate driving circuit to a gate of the display cell circuit (Fig. 1).

Regarding claims 4, 5, 13, and 14, Kawaguchi further teaches the driving signal line group comprise: a plurality of gate driving signal input lines (44) that are formed on the flexible board (4) to provide the gate driving signal to the gate driving circuit (Figs. 1 and 2) (from col. 18, line 39 to col. 19, line 20); a plurality of gate driving signal bypass lines (277) which are formed on the flexible board (230) to provide the gate driving signal supplied from the gate driving circuit to a next circuit (Fig. 49) (col. 13, lines 15-24, from col. 36, line 46 to col. 37, line 12); and a plurality of gate driving signal output lines (42) are connected between the gate driving circuit and the signal transmission lines (i.e., electrode terminal 3) so as to provide the gate driving signal supplied from the gate driving circuit to the signal transmission lines (3) (Fig. 2) (from col. 18, line 39 to col. 19, line 20).

Regarding claims 6 and 15, Kawaguchi further teaches the inspecting patterns are formed at only the plurality of gate driving signal input lines (col. 22, lines 51-61).

Regarding claims 9 and 11, Kawaguchi teaches a liquid crystal display device, comprising: a liquid crystal display panel (20) having data lines and gate lines and display cell circuits that are connected to data line and gate lines respectively, the liquid crystal display panel displaying an image in response to first and second driving signals inputted through the data lines and gate lines (Fig. 1); an integrated printed circuit board (4) that generates the first and second driving signals; a plurality of first driving modules (i.e., data driver, not shown) that are electrically connected between the integrated printed circuit board (4) and the data lines so as to transmit the first driving signal to the data lines (col. 19, lines 22-32); and a plurality of second driving modules (i.e., gate driver, not shown) having a driving signal line groups that are electrically connected to the gate lines, the second driving modules are electrically connected to

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the integrated printed circuit board through signal transmission lines (73) formed on liquid crystal panel (20), and the second driving modules transmitting the second driving signal to the gate lines (col. 19, lines 22-32).

Regarding claim 10, Kawaguchi further teaches the plurality of driving signal line group is formed on the flexible board disposed at a side of the transparent substrate (Fig. 2).

Regarding claim 20, Kawaguchi teaches a display apparatus, comprising: a transistor substrate (2); and integrated printed circuit board (4) arranged adjacent to the transistor substrate (2); a first driving module (i.e., data driver) having a first end and a second end, the first end connected to the integrated print circuit board and the second end connected to the transistor substrate, wherein the driving module includes a plurality of signal transmission line; and a second driving module (i.e., gate driver) having a first end and a second end, the first end connected to the transistor substrate, whenever the driving module comprises a plurality of input signal lines (44) in electrical communication with the plurality of signal transmission lines (73) (col. 18, line 56 to col. 19, line 21) (Figs. 1 and 2), a portion of the plurality of input signal lines include an inspecting pattern (i.e., prober terminal) to allow for an inspection of an electrical signal in plurality of input signal lines (col. 22, lines 51-61).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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5. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kawaguchi et al. (Patent No.: 5,592,199) in view of Kobayashi (Patent No.: 5,959,713).

Regarding claim 8, Kawaguchi differs from claim 8 in that he does not specifically teach the inspecting means is formed by point-shaped patterns having an area larger than an area of each gate driving signal input line and gate driving signal bypass line. However, referring to Fig. 4, Kobayashi teaches the inspecting means (16, 17) is formed by point-shaped patterns having an area larger than an area of each gate driving signal input line (12) and gate driving signal bypass line (col. 7, lines 10-22). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the inspecting means as taught by Kobayashi in the system of Kawaguchi in order to inspect the driving signal supplied to the gate lines easily and efficiently.

6. Claims 7, 16, and 17 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

7. Applicant's arguments with respect to claims have been considered but are moot in view of the new ground(s) of rejection.

8. The prior art made of record and not relied upon is considered to pertinent applicant's disclosure.

Kim et al. (Patent No. : US 6,639,589) teaches tape carrier package and a LCD having the Same.

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Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Jennifer T. Nguyen** whose telephone number is **703-305-3225**.

The examiner can normally be reached on Mon-Fri from 9:00-5:30.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, DC. 20231

Or faxed to: 703-872-9306 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, sixth-floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is 703-306-0377.

JNguyen
9/29/2004


REGINA LIANG
PRIMARY EXAMINER